



Milk Production

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September Milk Production up 0.4 Percent

Milk production in the 24 major States during September totaled 17.3 billion pounds, up 0.4 percent from September 2020. August revised production, at 17.9 billion pounds, was up 0.7 percent from August 2020. The August revision represented a decrease of 75 million pounds or 0.4 percent from last month's preliminary production estimate.

Production per cow in the 24 major States averaged 1,937 pounds for September, 4 pounds below September 2020.

The number of milk cows on farms in the 24 major States was 8.93 million head, 48,000 head more than September 2020, but 22,000 head less than August 2021.

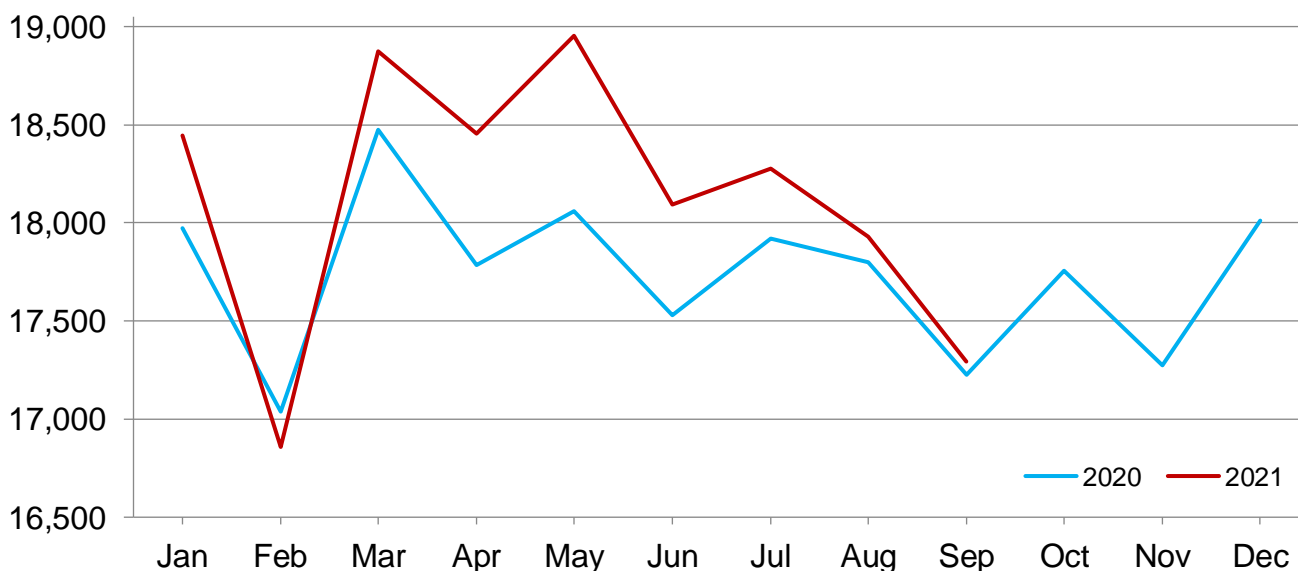
July-September Milk Production up 0.9 Percent

Milk production in the United States during the July - September quarter totaled 55.9 billion pounds, up 0.9 percent from the July - September quarter last year.

The average number of milk cows in the United States during the quarter was 9.45 million head, 48,000 head less than the April - June quarter, but 74,000 head more than the same period last year.

Monthly Milk Production - 24 Selected States

Million pounds



Milk Cows and Production by Quarter – United States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Quarter	Milk cows ¹		Milk per cow ²		Milk production ²		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January-March	9,378	9,458	5,990	6,003	56,174	56,776	1.1
April-June	9,364	9,502	5,988	6,119	56,070	58,141	3.7
July-September	9,380	9,454	5,908	5,915	55,419	55,917	0.9
October-December	9,429		5,892		55,557		
Annual	9,388		23,777		223,220		

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Milk Cows and Production by Month – 24 Selected States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Month	Milk cows ¹		Milk per cow ²		Milk production ²		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January	8,837	8,934	2,034	2,065	17,974	18,446	2.6
February	8,848	8,947	1,926	1,884	17,038	16,858	-1.1
March	8,861	8,961	2,085	2,106	18,474	18,873	2.2
April	8,855	8,985	2,009	2,054	17,787	18,454	3.7
May	8,838	8,996	2,044	2,107	18,061	18,953	4.9
June	8,834	8,993	1,984	2,012	17,530	18,091	3.2
July	8,854	8,989	2,024	2,033	17,919	18,275	2.0
August	8,857	8,947	2,010	2,004	17,799	17,927	0.7
September	8,877	8,925	1,941	1,937	17,226	17,292	0.4
October	8,897		1,996		17,758		
November	8,914		1,938		17,274		
December	8,923		2,019		18,012		
Annual	8,866		24,008		212,852		

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Estimated Milk Cows and Production by Month – United States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Month	Milk cows ¹		Milk per cow ²		Milk production ²		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January	9,365	9,445	2,016	2,047	18,877	19,330	2.4
February	9,377	9,458	1,908	1,868	17,895	17,666	-1.3
March	9,391	9,472	2,066	2,088	19,402	19,780	1.9
April	9,377	9,496	1,993	2,036	18,684	19,332	3.5
May	9,360	9,507	2,027	2,088	18,972	19,855	4.7
June	9,355	9,503	1,968	1,995	18,414	18,954	2.9
July	9,372	9,492	2,001	2,013	18,756	19,103	1.9
August	9,374	9,447	1,988	1,984	18,632	18,739	0.6
September	9,395	9,422	1,919	1,918	18,031	18,075	0.2
October	9,414		1,976		18,603		
November	9,432		1,919		18,103		
December	9,442		1,997		18,851		
Annual	9,388		23,777		223,220		

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Milk Cows and Production – 24 Selected States: September 2020 and 2021

[May not add due to rounding]

State	Milk cows ¹		Milk per cow ²		Milk production ²		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona	200	197	1,845	1,840	369	362	-1.9
California	1,720	1,720	1,905	1,910	3,277	3,285	0.2
Colorado	200	200	2,145	2,145	429	429	-
Florida	112	105	1,445	1,440	162	151	-6.8
Georgia	80	82	1,650	1,670	132	137	3.8
Idaho	645	651	2,075	2,050	1,338	1,335	-0.2
Illinois	84	82	1,645	1,650	138	135	-2.2
Indiana	191	192	1,935	1,925	370	370	-
Iowa	219	225	2,005	2,000	439	450	2.5
Kansas	171	170	1,920	1,925	328	327	-0.3
Michigan	430	442	2,220	2,200	955	972	1.8
Minnesota	450	461	1,870	1,870	842	862	2.4
New Mexico	327	300	2,025	1,930	662	579	-12.5
New York	626	628	1,985	2,015	1,243	1,265	1.8
Ohio	254	256	1,790	1,780	455	456	0.2
Oregon	125	124	1,705	1,700	213	211	-0.9
Pennsylvania	482	475	1,690	1,680	815	798	-2.1
South Dakota	140	160	1,905	1,915	267	306	14.6
Texas	598	625	2,025	1,985	1,211	1,241	2.5
Utah	94	96	1,910	1,925	180	185	2.8
Vermont	120	120	1,725	1,725	207	207	-
Virginia	74	72	1,575	1,565	117	113	-3.4
Washington	279	264	2,005	1,950	559	515	-7.9
Wisconsin	1,256	1,278	2,005	2,035	2,518	2,601	3.3
24-State Total	8,877	8,925	1,941	1,937	17,226	17,292	0.4

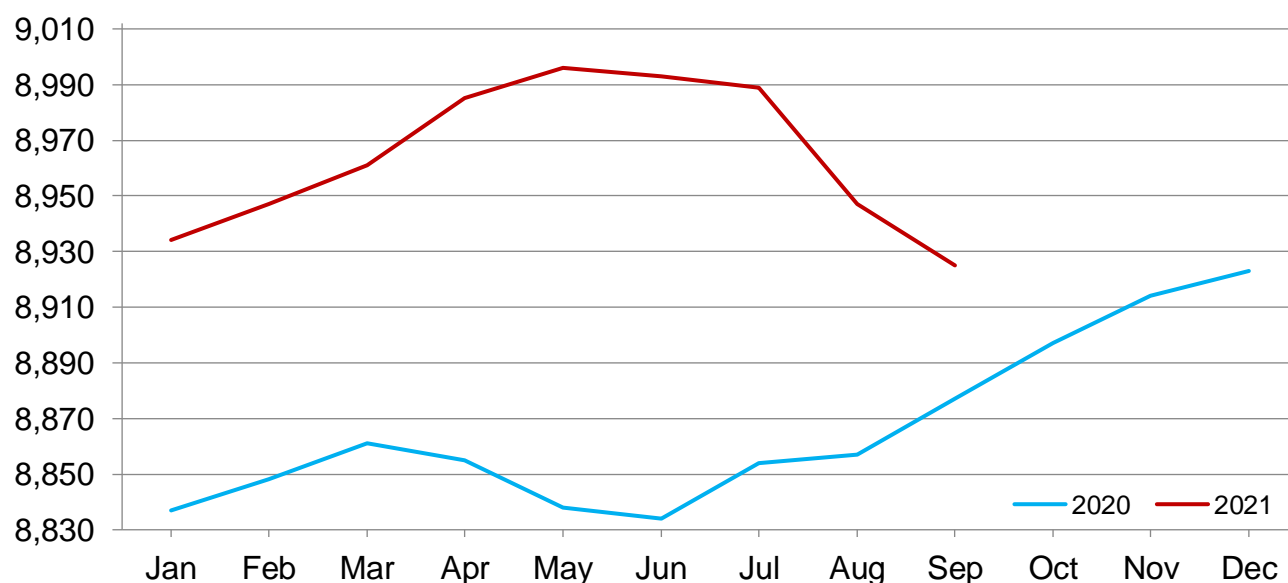
- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Monthly Milk Cows - 24 Selected States

Thousand head



Milk Production (October 2021)

USDA, National Agricultural Statistics Service

Milk Cows and Production – 24 Selected States: August 2020 and 2021

[May not add due to rounding]

	Milk cows ¹		Milk per cow ²		Milk production ²		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona	200	198	1,850	1,845	370	365	-1.4
California	1,721	1,720	1,960	1,970	3,373	3,388	0.4
Colorado	198	200	2,225	2,220	441	444	0.7
Florida	111	106	1,570	1,540	174	163	-6.3
Georgia	80	82	1,700	1,730	136	142	4.4
Idaho	645	651	2,190	2,170	1,413	1,413	-
Illinois	83	82	1,720	1,720	143	141	-1.4
Indiana	189	192	1,970	1,940	372	372	-
Iowa	218	225	2,070	2,055	451	462	2.4
Kansas	170	170	1,995	1,985	339	337	-0.6
Michigan	428	444	2,320	2,290	993	1,017	2.4
Minnesota	445	461	1,955	1,940	870	894	2.8
New Mexico	326	311	2,055	1,955	670	608	-9.3
New York	626	628	2,070	2,075	1,296	1,303	0.5
Ohio	254	258	1,865	1,850	474	477	0.6
Oregon	124	124	1,775	1,770	220	219	-0.5
Pennsylvania	482	475	1,745	1,750	841	831	-1.2
South Dakota	138	160	1,970	1,980	272	317	16.5
Texas	593	625	2,080	2,035	1,233	1,272	3.2
Utah	95	97	1,975	1,995	188	194	3.2
Vermont	121	120	1,775	1,775	215	213	-0.9
Virginia	74	72	1,640	1,625	121	117	-3.3
Washington	279	268	2,075	2,020	579	541	-6.6
Wisconsin	1,257	1,278	2,080	2,110	2,615	2,697	3.1
24-State Total	8,857	8,947	2,010	2,004	17,799	17,927	0.7

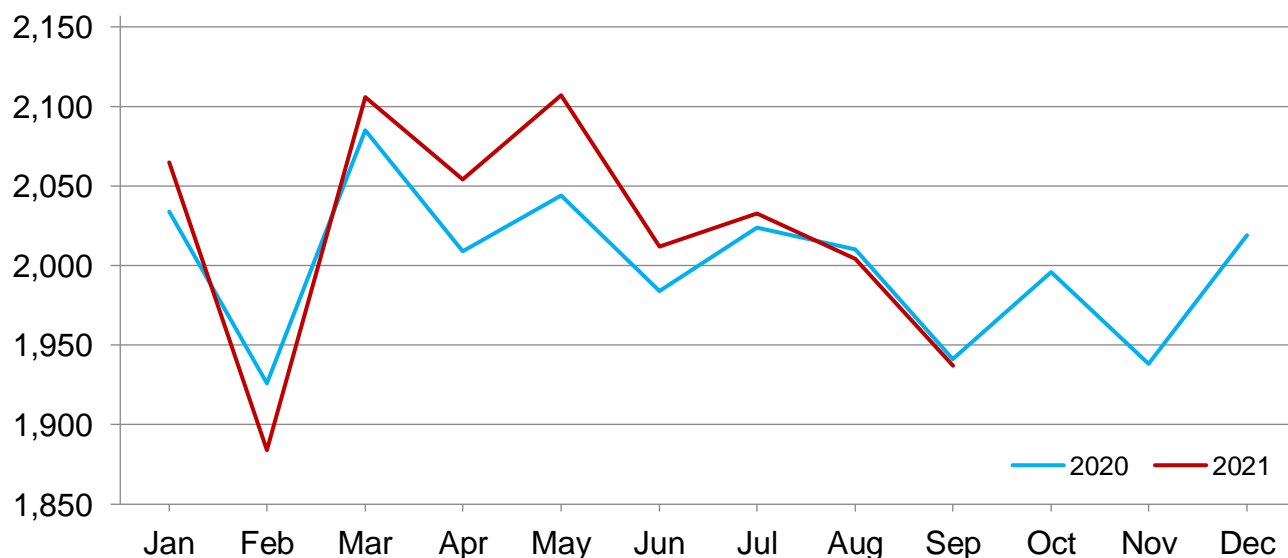
- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Monthly Milk Per Cow - 24 Selected States

Pounds



Milk Cows and Production – States and United States: Revised April - June 2020 and 2021

[May not add due to rounding]

State	April - June milk cows ¹		April - June milk production ²		
	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama	3.5	3.0	12.0	11.0	-8.3
Alaska	(D)	(D)	(D)	(D)	(NA)
Arizona	200.0	198.0	1,263.0	1,266.0	0.2
Arkansas	5.0	5.0	18.0	17.0	-5.6
California	1,721.0	1,721.0	10,420.0	10,849.0	4.1
Colorado	196.0	205.0	1,278.0	1,337.0	4.6
Connecticut	19.0	19.0	110.0	113.0	2.7
Delaware	3.8	3.0	18.7	14.0	-25.1
Florida	113.0	110.0	594.0	580.0	-2.4
Georgia	82.0	82.0	449.0	462.0	2.9
Hawaii	(D)	(D)	(D)	(D)	(NA)
Idaho	643.0	654.0	4,091.0	4,210.0	2.9
Illinois	82.0	83.0	456.0	462.0	1.3
Indiana	177.0	196.0	1,067.0	1,186.0	11.2
Iowa	218.0	228.0	1,343.0	1,404.0	4.5
Kansas	168.0	174.0	984.0	1,040.0	5.7
Kentucky	48.0	46.0	253.0	242.0	-4.3
Louisiana	10.0	9.5	37.0	35.0	-5.4
Maine	27.0	27.0	152.0	149.0	-2.0
Maryland	42.0	43.0	223.0	228.0	2.2
Massachusetts	10.0	10.0	51.0	52.0	2.0
Michigan	428.0	445.0	2,930.0	3,061.0	4.5
Minnesota	443.0	462.0	2,524.0	2,656.0	5.2
Mississippi	8.5	7.5	36.0	29.0	-19.4
Missouri	76.0	72.0	301.0	283.0	-6.0
Montana	11.5	11.0	64.0	62.0	-3.1
Nebraska	59.0	58.0	364.0	359.0	-1.4
Nevada	31.0	33.0	195.0	204.0	4.6
New Hampshire	11.0	10.5	60.0	58.0	-3.3
New Jersey	4.7	4.4	25.0	24.0	-4.0
New Mexico	328.0	330.0	2,006.0	2,094.0	4.4
New York	626.0	629.0	3,856.0	3,983.0	3.3
North Carolina	41.0	40.0	229.0	239.0	4.4
North Dakota	14.5	15.0	82.0	86.0	4.9
Ohio	253.0	260.0	1,408.0	1,447.0	2.8
Oklahoma	42.0	40.0	194.0	181.0	-6.7
Oregon	125.0	126.0	667.0	673.0	0.9
Pennsylvania	483.0	475.0	2,616.0	2,613.0	-0.1
Rhode Island	0.5	0.5	2.7	2.6	-3.7
South Carolina	10.5	9.0	52.0	42.0	-19.2
South Dakota	134.0	154.0	765.0	889.0	16.2
Tennessee	30.0	29.0	142.0	136.0	-4.2
Texas	590.0	622.0	3,655.0	3,971.0	8.6
Utah	96.0	96.0	567.0	575.0	1.4
Vermont	123.0	119.0	656.0	655.0	-0.2
Virginia	75.0	73.0	391.0	380.0	-2.8
Washington	279.0	276.0	1,719.0	1,689.0	-1.7
West Virginia	6.0	5.0	23.0	19.0	-17.4
Wisconsin	1,258.0	1,274.0	7,673.0	8,016.0	4.5
Wyoming	7.5	8.5	46.5	55.7	19.8
Other States ³	0.9	0.9	1.2	1.3	8.3
United States	9,364.0	9,502.0	56,070.0	58,141.0	3.7

(D) Withheld to avoid disclosing data for individual operations.

(NA) Not available.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

³ Other States includes Alaska and Hawaii.

Milk Cows and Production – States and United States: Preliminary July - September 2020 and 2021

[May not add due to rounding]

State	July - September milk cows ¹		July - September milk production ²		
	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama	3.2	2.5	9.0	7.0	-22.2
Alaska	(D)	(D)	(D)	(D)	(NA)
Arizona	200.0	198.0	1,126.0	1,111.0	-1.3
Arkansas	5.0	4.5	14.0	13.0	-7.1
California	1,721.0	1,720.0	10,118.0	10,106.0	-0.1
Colorado	199.0	201.0	1,313.0	1,325.0	0.9
Connecticut	19.0	19.0	106.0	105.0	-0.9
Delaware	3.8	3.0	16.4	12.0	-26.8
Florida	111.0	107.0	519.0	489.0	-5.8
Georgia	80.0	82.0	410.0	425.0	3.7
Hawaii	(D)	(D)	(D)	(D)	(NA)
Idaho	645.0	652.0	4,176.0	4,180.0	0.1
Illinois	83.0	82.0	426.0	423.0	-0.7
Indiana	189.0	194.0	1,109.0	1,130.0	1.9
Iowa	218.0	226.0	1,335.0	1,382.0	3.5
Kansas	170.0	171.0	1,002.0	1,009.0	0.7
Kentucky	47.0	45.0	215.0	209.0	-2.8
Louisiana	9.5	9.0	27.0	25.0	-7.4
Maine	27.0	26.0	147.0	144.0	-2.0
Maryland	42.0	43.0	209.0	211.0	1.0
Massachusetts	10.0	9.5	49.0	48.0	-2.0
Michigan	429.0	444.0	2,937.0	3,021.0	2.9
Minnesota	447.0	461.0	2,575.0	2,655.0	3.1
Mississippi	8.5	7.0	28.0	22.0	-21.4
Missouri	75.0	70.0	253.0	237.0	-6.3
Montana	11.5	11.0	64.0	61.0	-4.7
Nebraska	59.0	58.0	360.0	352.0	-2.2
Nevada	31.0	33.0	195.0	207.0	6.2
New Hampshire	11.0	10.5	57.0	56.0	-1.8
New Jersey	4.7	4.2	24.0	21.0	-12.5
New Mexico	326.0	311.0	1,989.0	1,829.0	-8.0
New York	626.0	629.0	3,838.0	3,904.0	1.7
North Carolina	40.0	39.0	210.0	218.0	3.8
North Dakota	15.0	15.0	84.0	85.0	1.2
Ohio	254.0	258.0	1,404.0	1,419.0	1.1
Oklahoma	41.0	38.0	165.0	157.0	-4.8
Oregon	124.0	124.0	658.0	655.0	-0.5
Pennsylvania	482.0	475.0	2,521.0	2,482.0	-1.5
Rhode Island	0.5	0.5	2.8	2.5	-10.7
South Carolina	10.0	9.0	40.0	36.0	-10.0
South Dakota	138.0	160.0	803.0	936.0	16.6
Tennessee	29.0	28.0	126.0	119.0	-5.6
Texas	594.0	625.0	3,662.0	3,816.0	4.2
Utah	95.0	97.0	557.0	574.0	3.1
Vermont	121.0	120.0	638.0	639.0	0.2
Virginia	74.0	72.0	361.0	350.0	-3.0
Washington	279.0	268.0	1,732.0	1,607.0	-7.2
West Virginia	6.0	5.0	22.0	18.0	-18.2
Wisconsin	1,257.0	1,278.0	7,735.0	8,027.0	3.8
Wyoming	8.0	8.5	50.5	56.4	11.7
Other States ³	0.8	0.9	0.9	1.3	44.4
United States	9,380.0	9,454.0	55,419.0	55,917.0	0.9

(D) Withheld to avoid disclosing data for individual operations.

(NA) Not available.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

³ Other States includes Alaska and Hawaii.

Statistical Methodology

Survey Procedures: Primary data used to determine these estimates were obtained from a sample of producers. Individual States maintain a list of all known milk producers and information on the size of their herd. States use all known sources of producers to ensure that their lists are as complete as possible. Generally, all large producers and a sample of small producers are included in the survey. Questionnaires are mailed to producers near the end of the month to obtain data for the first day of the month. Additional reports are obtained by telephone, as needed, to supplement the mail response. Where feasible, States utilize state and federal administrative data to estimate milk production. This eliminates duplication of data gathering by different government agencies. Indications of milk cow inventory are also obtained in the January Cattle Surveys.

Estimation Procedures: Regional Field Offices prepare these estimates by using a combination of survey indications, historic trends, and any available administrative data. Individual State estimates are reviewed by the Agricultural Statistics Board for reasonableness.

Revision Policy: Milk production, milk per cow, and number of milk cows are subject to revision the following month after initial publication for monthly States or the following quarter for the quarterly States. Normally, administrative data from Federal Market Orders, State Departments of Agriculture, or other sources are the main basis for revisions. However, administrative data for all States may not be available in time for these revisions. Estimates are again subject to revisions in February each year based on additional administrative data. In the event that additional changes are necessary, a third revision is possible in February the following year. Estimates are again reviewed after data from the five-year Census of Agriculture are available. No revisions are made after that date.

Reliability: Since all operations with dairy animals are not included in the sample, survey estimates are subject to sampling variability. Survey results are also subject to non-sampling errors such as omissions, duplications, and mistakes in reporting, recording, and processing the data. The effects of these errors cannot be measured directly. They are minimized through rigid quality controls in the data collection process and through a careful review of all reported data for consistency and reasonableness.

To assist users in evaluating the reliability of the estimates in this report, the "Root Mean Square Error" is shown for selected items on the next page. The "Root Mean Square Error" is a statistical measure based on past performance and is computed using the differences between first and final estimates. The "Root Mean Square Error" for milk production estimates over the past 20 quarters is 0.1 percent. This means that chances are 2 out of 3 that the final estimate will not be above or below the current estimate of 55.9 billion pounds by more than 0.1 percent. Chances are 9 out of 10 that the difference will not exceed 0.3 percent.

Reliability of Quarterly Milk Production Estimates

[Based on data for the past 20 quarters]

Item	Root mean square error	90 percent confidence level	Difference between first and latest estimate				
			Average	Smallest	Largest	Quarters	
						Below latest	Above latest
	(percent)	(percent)	(1,000)	(1,000)	(1,000)	(number)	(number)
Milk production	0.1	0.3	56	1	215	14	6
All milk cows	0.1	0.2	9	0	26	16	2

Information Contacts

Listed below are the commodity specialists in the Livestock Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@usda.gov.

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Sherry Bertramsen – Livestock Slaughter	(202) 690-8632
Ryan Cowen – Cattle, Cattle on Feed	(202) 720-3040
Anthony Fischer – Hogs and Pigs	(202) 720-3106
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Mike Miller – Milk Production and Milk Cows	(202) 720-3278
Suzanne Richards – Dairy Products	(202) 720-4448

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For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@usda.gov.

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